The following claims will replace all prior versions of the claims in this application:

1. (Currently amended) A method of digitizing shapes, said method comprising:

receiving at least one data representing at least one shape;

identifying at least one outline of the at least one shape in the at least one data, wherein the outline has a curvature;

identifying at least one corner of the at least one outline wherein said corner is identified by calculating the curvature of the outline in a neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value; and

identifying at least one notch of the at least one outline wherein said notch is identified by determining a plurality of turn points on the outline, wherein the distance between a first turn point and a second turn point is less than a predetermined maximum value and at least a predetermined minimum value ~~curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline~~.

2. (Currently amended) A system for digitizing shapes, said system comprising:

a memory arrangement including thereon a computer program; and

a processing arrangement which, when executing the computer program is configured to:

receive at least one data representing at least one shape;

identify at least one outline of the at least one shape in the at least one data, wherein the outline has a curvature;

identify at least one corner having a relatively large average curvature of the at least one outline wherein said corner is identified by calculating the curvature of the outline in a neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value; and

identify at least one notch of the at least one outline wherein said notch is identified by determining a plurality of turn points on the outline, wherein the distance between a first turn point and a second turn point is less than a predetermined maximum value and at least a

predetermined minimum value ~~curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline~~.

3. (Currently amended) Software stored in a computer-readable storage medium which, when executed by a processing arrangement, is configured to digitize shapes, said software storage medium comprising:

a software program including:

a first module which, when executed, receives at least one data representing at least one shape;

a second module which, when executed, identifies at least one outline of the at least one shape in the at least one data, wherein the outline has a curvature;

a third module which, when executed, identifies at least one corner having a relatively large average curvature of the at least one outline wherein said corner is identified by calculating the curvature of the outline in a neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value~~; and~~

~~a fourth module which, when executed~~, and identifies at least one notch of the at least one outline wherein said notch is identified by determining a plurality of turn points on the outline, wherein the distance between a first turn point and a second turn point is less than a predetermined maximum value and at least a predetermined minimum value~~curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline~~.

4. (Withdrawn) A method of garment pattern digitization comprising the steps of:

a) receiving image data representation of a garment pattern;

b) analyzing said image data and vectorizing said image data to convert said image data to vector data;

c) analyzing said vector data, to identify, measure, and classify at least one garment pattern element; and,

d) outputting a digitized representation of the hard-paper pattern.

5. (Withdrawn) The method of claim 4 wherein user input is receive on a heads-down interactive display and user output is receive on a heads-down interactive display.

6. (Withdrawn) The method of claim 4 wherein said pattern is a hard-paper cutout pattern.

7. (Withdrawn) The method of claim 4 wherein said pattern is a white-paper non-cutout pattern.

8. (Withdrawn) The method of claim 4 wherein said pattern is a photograph of an actual garment.

9. (Withdrawn) The method of claim 4 wherein said at least one pattern element is a pattern boundary.

10. (Withdrawn) The method of claim 9 wherein said analyzing step includes at least one additional pattern element being a turn points on said pattern boundary.

11. (Withdrawn) The method of claim 10 wherein said analyzing step includes at least one additional pattern elements being a curve points on said pattern boundary.

12. (Withdrawn) The method of claim 4 wherein said at least one pattern element is selected from the group consisting of notches, grain lines, mirror lines, internal lines, internal cutouts, grade lines, alternate grade lines, stripe reference lines, plaid reference lines, drill holes, sew lines, cut/fold lines, and balance lines.

13. (Withdrawn) A method of identifying the pattern boundary of a garment pattern, the method comprising the steps of:

a) receiving a color raster image of the garment pattern;

b) selecting an optimum color filter;

c) converting said color raster image to grey-scale raster data;

d) converting said grey-scale raster data to black and white raster data;

e) converting said black and white raster data to vector data;

f) determining a subclass of said vector data that form polygons;

g) determining largest polygon;

h) labeling largest polygon "pattern boundary";

i) digitizing pattern boundary in garment industry file format.

14. (Withdrawn) The method of claim 13, wherein garment industry files format is selected from the group consisting of ASTM/AAMA-DXF, Gerber (a.k.a. Accumark), Lectra Investronica, Optitex, Polygon, PAD, and Micromark.

15. (Withdrawn) A method identifying a turn point of a garment pattern, the method comprising the steps of:

a) receiving at least three digitized pattern boundary points of said garment pattern;

b) arranging said boundary points sequentially;

c) determining the angle between said three boundary points;

d) identifying a middle point of said three points as a turn point if said angle is less than about one hundred and eighty degrees and is substantially less than a predetermined threshold, or if said angle is more than about one hundred and eighty degrees and the result of subtracting said angle from three hundred and sixty is substantially less than said predetermined threshold;

e) outputting said turn point to a user output device.

16. (Withdrawn) The method of claim 15, wherein said receiving, arranging, determining, identifying and outputting steps are repeated for each pattern boundary point of said garment pattern.

17. (Withdrawn) A method of identifying a curve point of a garment pattern, the method comprising the steps of:

i) receiving a plurality of boundary points and a plurality of turn points of said garment pattern;

ii) arranging said boundary points and said turn points sequentially;

iii) selecting sequences of two consecutive turn points;

iv) selecting all boundary points that lie between said sequences of two consecutive turn points and identifying said selected boundary points as curve points if said boundary points do not substantially lie on a straight line between said two consecutive turn points;

v) out putting said identified curve points to a user output device.

18. (Withdrawn) The method of claim 17, wherein steps(i)-(v) are repeated for all said sequences of two consecutive turn points of said garment pattern element.

19. (Withdrawn) A method of identifying notch points of a garment pattern, the method comprising the steps of:

i) receiving a plurality of boundary points and a plurality of turn points of said garment pattern;

ii) arranging said boundary points and said turn points sequentially;

iii) selecting sequences of five consecutive turn points, comprising a first, second, third, fourth, and fifth turn points;

iv) identifying said consecutive turn points as notch points provided that:

- the distance between first notch point and fifth notch point is substantially equal to a predetermined standard notch distance, and
- the difference in direction of the garment pattern before and after said turn points is substantially equal to a predetermined angles matching angles of standard predefined notches;

v) outputting said notch points to a user output device.

20. (Withdrawn) The method of claim 19 wherein,

a) said difference in direction of the garment pattern, immediately before and after said first turn point is about positive two hundred and seventy degrees, and

b) said difference in direction of the garment pattern, immediately before and after said second turn point is about positive forty five degrees, and

c) said difference in direction of the garment pattern immediately before and after said third turn point is about positive ninety degrees, and

d) said difference in direction of the garment pattern immediately before and after said forth turn point is about positive forty five degrees, and

e) said difference in direction of the garment pattern immediately before and after said fifth point is about positive two hundred and seventy degrees.

21. (Withdrawn) The method and claim 19, wherein steps (iii), (iv), and (v) are repeated for all said sequences of five consecutive turn points of said garment pattern element.

22. (Withdrawn) A method of identifying notch points of a garment pattern, the method comprising the steps of :

i) receiving a plurality of boundary points and a plurality of turn points;

ii) receiving original raster data from which vector data was extracted;

iii) receiving at least one image of a known notch;

iv) arranging said boundary points and turn points in sequential order;

v) selecting a turn point;

vi) locating said selected turn point on said original raster data;

vii) extracting a sub-image substantially adjacent to selected turn point;

viii) determining whether there is a group of boundary points either before or after said turn point that substantially correspond with at least one of said images;

ix) identifying said group of boundary points as a notch corresponding to said image; and

x) outputting said notch to a user output device.

23. (Withdrawn) The method of claim 22, wherein steps (v)-(x) are repeated for all said turn points of said garment pattern element.

24. (Withdrawn) A method of modifying the shape of an extracted notch, the method comprising the steps of:

a) receiving a plurality of pattern boundary points and notch points forming at least one notch;

b) selecting a notch;

c) receiving raster data representing said garment pattern;

d) locating an image of said selected notch on said raster data;

e) locating a centre of said image;

f) locating a straight line substantially perpendicular to said pattern boundary in substantially close vicinity of said image.

g) notifying a user that there is a discrepancy and prompting said user to choose between said straight line and said selected notch, if said straight line does not intersect said pattern boundary and said centre of said image.

25. (Withdrawn) A method of identifying a grain line of a garment pattern, the method comprising the steps of:

i) receiving a plurality of vector points of said garment pattern;

ii) determining which vector points form polygons;

iii) determining which polygon forms a pattern boundary;

iv) removing vector points that form said polygons except for said pattern boundary;

v) arranging vector points according to lines and in sequential order;

vi) identifying each line as a grain line where:

- all vector points forming said line are substantially on a straight line; all points forming said lines are substantially within said pattern boundary;
- said line is substantially parallel to a row of pixels in said raster data;
- said line has an arrowhead at one end; and
- said line has a length within an acceptable range;

vii) outputting said grain line to a user output device.

26. (Withdrawn) The method of claim 25, wherein said identifying step and said outputting step are repeated for every said line of said garment pattern element.

27. (Withdrawn) The method of either claim 25, wherein the following steps are used to identify an arrowhead, the method comprising the steps of:

a) receiving a library of known arrowheads comprising a plurality of arrowheads

b) receiving any objects that intersect said line;

c) identifying a said object as an arrowhead if one of said arrowheads in said library of known arrowheads substantially aligns with said object.

28. (Withdrawn) The method of claim 25, wherein the following steps are used to identify an arrowhead, the method comprising the steps of:

a) receiving all line segments intersecting said line;

b) identifying two line segments as forming an arrowhead provided that:

c) said two line segments intersect said line in almost the same location;

d) said two line segments have a predefined maximum length;

e) each of said two line segments is less than about positive ninety degrees on either side of said line; and

f) neither of said two line segments intersects another pattern element or line segment.

29. (Withdrawn) A method of identifying drill holes of a garment pattern, the method comprising the steps of:

a) receiving a plurality of vector points;

b) arranging vector points according to lines and in sequential order;

c) determining which said points form a pattern boundary;

d) removing all said points which form said lines except points forming said pattern boundary and points forming line segment pairs that intersect each other but do not intersect said pattern boundary;

e) identifying a line segment pair as a drill hole provided that:

i) each line segment in said line segment pair is substantially perpendicular to the other line segment in said pair;

ii) each line segment in said line segment pair is about a quarter of an inch in length; and

iii) each line segment in said line segment pair is substantially within said pattern boundary;

iv) outputting said drill hole to a user output device.

30. (Withdrawn) The method of claim 29, wherein said arranging, identifying and outputting steps are repeated for all said line segment pairs of said garment pattern in a substantially sequential order.

31. (Withdrawn) A method of identifying fold-cut lines of a garment pattern, the method comprising the steps of:

i) receiving a plurality of vector points of said garment pattern;

ii) arranging said points according to lines and in sequential order;

iii) determining which said lines form a pattern boundary;

iv) removing all said points except points that form said pattern boundary and points that form line segments which intersect said pattern boundary;

v) determining boundary intersection points to be points of intersection of said pattern boundary and said line segments which intersect said pattern boundary;

vi) selecting one boundary intersection point,

vii) constructing reference lines from said selected boundary intersection point to all other boundary intersection points that are not selected and labeling them opposing boundary intersection points,

- sequentially arranging said opposing boundary intersection points,
- selecting one opposing boundary intersection point at a time,
- receiving linear region from original raster data that corresponds to said selected boundary intersection point and said selected opposing boundary intersection point,
- determining whether there is a dashed line between said selected boundary intersection point and said selected opposing boundary intersection point and identifying said dashed line as fold-cut line;

viii) outputting said fold-cut line to user output device.

32. (Withdrawn) The method of claim 31, wherein steps (vi) to (viii) are repeated for all said boundary extraction points.

33. (Withdrawn) A method of identifying internal cutouts of a garment pattern, the method comprising the steps of:

i) receiving a plurality of vector points of said garment pattern;

ii) arranging vector points according to lines and in sequential order;

iii) determining which said lines form a pattern boundary;

iv) selecting all lines, except said pattern boundary;

v) determining background color of said garment pattern;

vi) determining whether each selected line is entirely within said pattern boundary, and if so, receiving original raster data corresponding to each selected line; and determining whether the enclosed region in said original raster data includes said background color;

vii) identifying a selected line as an internal cutout if said selected line is entirely within said pattern boundary and the enclosed region in said original raster data includes said background color;

viii) outputting said internal cutout to a user output device.

34. (Withdrawn) The method of claim 33, wherein steps (vi) to (viii) are repeated for all said selected lines.

35. (Withdrawn) A method of identifying mirror lines of a garment pattern, the method comprising the steps of:

i) receiving vector points of said garment pattern;

ii) arranging vector points according to lines and in sequential order;

iii) determining which said lines form a pattern boundary;

iv) removing all said points forming polygons, except points forming said pattern boundary;

v) identifying a remaining line as a mirror line, if for that particular remaining line:

- it is determined that all vector points on said remaining line lie are substantially straight,
- it is determined that said end points of said remaining line intersect said pattern boundary, and
- it is determined that after generating a series of equally spaced points along said selected line and, for each said substantially equally spaced point along said selected line, constructing a line substantially perpendicular to said selected line extending to the pattern boundary on either side of said selected line, it is determined that each equally spaced point along said selected line is at about midpoint of each line perpendicular to said selected line extending to either sides of said selected line;

vi) outputting said mirror line to a user output device.

36. (Withdrawn) The method of claim 35, wherein steps (v) and (vi) are repeated for all said remaining lines.

37. (Withdrawn) A method of identifying sew lines of a garment pattern, the method comprising the steps of:

i) receiving vector points of a garment pattern;

ii) arranging vector points according to lines and in sequential order;

iii) determining which said lines form a pattern boundary;

iv) removing all said lines except lines forming said pattern boundary and lines containing at least one turn point;

v) identifying a remaining line as a dew line, if every vector point on that particular remaining line is about one half of an inch from said pattern boundary;

vi) outputting said sew line to a user output device.

38. (Withdrawn) The method of claim 37, wherein steps (v) and (vi) are repeated for all said remaining lines.

39. (Withdrawn) A method of identifying plaid reference lines of a garment pattern, the method comprising the steps of:

i) receiving vector points of said garment pattern;

ii) arranging vector points according to lines and in sequential order;

iii) determining which said lines form a pattern boundary;

iv) removing all said line except said pattern boundary and lines intersecting said pattern boundary;

v) labeling remaining lines sequentially by order of appearance around said pattern boundary;

vi) identifying a said remaining line as a plaid reference line if it is determined that said remaining line is:

- substantially perpendicular to said pattern boundary,
- less than about one half of an inch in length,
- does not have a substantially identical neighbor about one quarter of an inch in the counterclockwise direction, and

- has three almost equally-spaced substantially identical neighbors about one quarter of an inch to three eighths of an inch in the clockwise direction;

vii) outputting said plaid reference line to a user output device.

40. (Withdrawn) The method of claim 39, wherein steps (vi) and (vii) are repeated for all said remaining lines.

41. (Withdrawn) A method of identifying stripe reference lines of a garment pattern, the method comprising the steps of:

i) receiving vector points of said garment pattern;

ii) arranging vector points according to lines and in sequential order;

iii) determining which said lines form a pattern boundary;

iv) removing all said line except said pattern boundary and lines intersecting said pattern boundary;

v) labeling remaining lines sequentially by order of appearance around said pattern boundary;

vi) identifying a said remaining line as a stripe reference line if it is determined that said remaining line is:

- substantially perpendicular to said pattern boundary,
- less than about one half of an inch in length,
- does not have a substantially identical neighbor, about one quarter of an inch in the counterclockwise direction, and
- has one or two almost equally-spaced substantially identical neighbors, about one quarter of an inch to three eighths of an inch in the clockwise direction;

vii) outputting said stripe reference line to a user output device.

42. (Withdrawn) The method of claim 41, wherein steps (vi) and (vii) are repeated for all said remaining lines.

43. (Withdrawn) A method of identifying balance lines of a garment pattern, the method comprising the steps of:

i) receiving vector points of said garment pattern;

ii) arranging vector points according to lines;

iii) determining which of said lines form a pattern boundary and which of said lines form a grain line;

iv) removing all said lines except lines forming said grain line, lines forming said pattern boundary and lines intersecting said grain line;

v) arranging said lines intersecting said grain line by order of intersecting said grain line;

vi) identifying a line intersecting said grain line as a balance line if it is determined that said line,

- is substantially perpendicular to said grain line,
- intersects said grain line substantially at midpoint of said line segment, and
- has endpoints which intersect said pattern boundary;

vii) outputting said balance line to a user output device.

44. (Withdrawn) The method of claim 43, wherein steps (vi) and (vii) are repeated for all said lines.

45. (Withdrawn) A method for assigning grading grid layouts to a garment pattern, the method comprising the steps of:

a) receiving a library of grading grid layouts comprising said grade rule numbers, said each grading grid layouts associated with a different type of garment pattern;

b) receiving a vectorized image of said garment pattern;

c) matching vectorized image of said garment pattern with one of grading grid layouts in said library;

d) substantially aligning said vectorized image of pattern piece with grading grid layout;

e) outputting said garment pattern substantially aligned with said grading grid layout to a user output device.

46. (Withdrawn) The method of claim 45, wherein said garment pattern is substantially aligned with said grading grid layout by substantially aligning the center mass point of said garment pattern with said grading grid layout.

47. (Withdrawn) The method of claim 46, said garment pattern is also substantially aligned by substantially aligning the axis of said grading grid layout with the axis of said garment pattern.

48. (Withdrawn) A method for assigning grade rule numbers of a garment pattern, the method comprising the steps of:

i) receiving list of rectangular coordinates (x,y) of turn points and notch points;

ii) labeling said turn points and notch points as grade points;

iii) labeling grade points in sequential order;

iv) selecting a point (n,m) as reference point;

v) performing a linear transformation wherein all grade points (x,y) are transformed to grade points (x-n, y-m);

vi) selecting a grading grid layout comprising a plurality of sectors overlaying said garment pattern;

vii) assigning a grading rule to each said grade point (x-n, y-m), in accordance with the location of each said grade point within said sectors of said grading grid layout.

49. (Withdrawn) The method of claim 48, wherein step (vii) is performed for all said grade points of said garment pattern.

50. (Withdrawn) The method of claim 48 wherein said sectors comprise four quadrants.

51. (Withdrawn) The method of claim 50, wherein said grade points are:

a) determined to be located in the first quadrant and are assigned a first grade rule, if it is determined that the y-coordinate of said grade point is substantially larger than zero and the x-coordinate of said grade point is substantially larger than zero;

b) determined to be located in the second quadrant and are assigned a second grade rule, if it is determined that the y-coordinate of said grade point is substantially larger than zero and the x-coordinate of said grade point is substantially smaller than zero;

c) determined to be located in the third quadrant and are assigned a third grade rule, if it is determined that the y-coordinate of said grade point is substantially smaller than zero and the x-coordinate of said grade point is substantially smaller than zero;

d) determined to be located in the fourth quadrant and are assigned a fourth grade rule, if it is determined that the y-coordinate of said grade point is substantially smaller than zero and the x-coordinate of said grade point is substantially larger than zero.

52. (Withdrawn) The method of claim 51 wherein said reference point (n,m) is the center mass point of the pattern piece.

53. (Withdrawn) A method for automatically updating digitized images of pattern elements, the method comprising;

a) receiving raster data, vector data and a sample image of a pattern ID;

b) searching for said pattern ID in both said raster data and said vector data;

c) selecting said raster data and said vector data that is associated with said pattern ID;

d) creating a difference image by subtracting said selected raster data from said selected vector data;

e) vectorizing said difference image;

f) determining end points of intersection of said vectorized difference image with said vector data;

g) identifying portions of said vectorized difference image and portions of said vector data that lie between said end points of intersection;

h) removing said portions of vector data that lie between said end points of intersection, and replacing said portions of vector data with said portions of vectorized difference image that lie between said end points of intersection.

54. (Withdrawn) The method of claim 53, wherein said pattern element is the pattern boundary.

55. (Withdrawn) A method for manually updating digitized images of pattern elements, the method comprising:

a) receiving raster data and vector data;

b) receiving a sample image of a pattern ID, said pattern ID comprising a plurality of reference point;

c) searching for said pattern ID in both said raster data and said vector data;

d) removing all portions of said raster data and all portions of said vector data that is not associated with said pattern ID;

e) using said reference points of pattern ID to align said raster image with said vector data;

f) making desired adjustments to vector data using a graphical user interface.

56. (Withdrawn) The method of claim 55, wherein said graphical user interface is a heads-down interactive display.

57. (Currently Amended) The method of claim 1, wherein the plurality of turn points~~curvatures~~ comprises at least three ~~curvatures~~turn points.

58. (Currently amended) The method of claim 57, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~at least three curvatures include a first curvature that is directed leftward, a second curvature that is directed rightward, and a third curvature that is directed leftward~~.

59. (Previously presented) The method of claim 1, wherein the at least one notch is represented by a series of point coordinates.

60. (Previously presented) The method of claim 72, wherein said digitized shape corresponds to the shape of a pattern for producing sewn goods.

61. (Previously presented) The method of claim 72, wherein said digitized shape corresponds to the shape of a garment pattern.

62. (Currently amended) The system of claim 2, wherein the plurality of turn points~~curvatures~~ comprises at least three ~~curvatures~~turn points.

63. (Currently amended) The system of claim 62, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~three curvatures include a first curvature that is directed~~

~~leftward, a second curvature that is directed rightward, and a third curvature that is directed leftward~~.

64. (Previously presented) The system of claim 2, wherein the at least one notch is represented by a series of point coordinates.

65. (Previously presented) The system of claim 73, wherein said digitized shape corresponds to the shape of a pattern for producing sewn goods.

66. (Previously presented) The system of claim 73, wherein said digitized shape corresponds to the shape of a garment pattern.

67. (Currently amended) The software storage medium of claim 3, wherein the plurality of turn points~~curvatures~~ comprises at least three ~~curvatures~~turn points.

68. (Currently amended) The software storage medium of claim 74, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point.

69. (Previously presented) The software storage medium of claim 3, wherein the at least one notch is represented by a series of point coordinates.

70. (Previously presented) The software storage medium of claim 74, wherein said digitized shape corresponds to the shape of a pattern for producing sewn goods.

71. (Previously presented) The software storage medium of claim 74, wherein said digitized shape corresponds to the shape of a garment pattern.

72. (Currently amended) A method of digitizing shapes, said method comprising:
receiving at least one data representing at least one shape;
identifying at least one outline of the at least one shape in the at least one data; and

identifying at least one notch of the at least one outline wherein said notch is identified by determining a plurality of turn points on the outline, wherein the distance between a first turn point and a second turn point is less than a predetermined maximum value and at least a predetermined minimum value ~~curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline~~.

73. (Currently amended) A system for digitizing shapes, said system comprising:

a memory arrangement including thereon a computer program; and

a processing arrangement which, when executing the computer program is configured to:

receive at least one data representing at least one shape;

identify at least one outline of the at least one shape in the at least one data; and

identify at least one notch of the at least one outline wherein said notch is identified by determining a plurality of turn points on the outline, wherein the distance between a first turn point and a second turn point is less than a predetermined maximum value and at least a predetermined minimum value ~~curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline~~.

74. (Currently amended) Software stored in a computer-readable storage medium which, when executed by a processing arrangement, is configured to digitize shapes, said software storage medium comprising:

a software program including:

a first module which, when executed, receives at least one data representing at least one shape;

a second module which, when executed, identifies at least one outline of the at least one shape in the at least one data; and

a third module which, when executed, identifies at least one notch of the at least one outline wherein said notch is identified by determining a plurality of curvatures, wherein each of the plurality of turn points on the outline, wherein the distance between a first turn point and a second turn point is less than a predetermined maximum value and at least a predetermined minimum value ~~curvatures is in a neighborhood of a point on the at least one outline~~.

75. (Currently amended) The method according to claim 57, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~curvatures include a first curvature that is directed rightward, a second curvature that is directed leftward, and a third curvature that is directed rightward~~.

76. (Currently amended) The method according to claim 62, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~curvatures include a first curvature that is directed rightward, a second curvature that is directed leftward, and a third curvature that is directed rightward~~.

77. (Currently amended) The method according to claim 57, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~curvatures include a first curvature that is directed rightward, a second curvature that is directed leftward, and a third curvature that is directed rightward~~.

78. (Previously presented) The method according to claim 67, wherein the at least three curvatures include a first curvature that is in the neighborhood of a first point, a second curvature that is in the neighborhood of a second point, and a third curvature that is the neighborhood of a third point.

79. (Currently amended) The method according to claim 72 wherein each of the plurality of curvatures is in a neighborhood of a different point.

80. (Previously presented) The method according to claim 72, wherein the at least one notch is further identified by a minimum depth.

81. (Previously presented) The method according to claim 72, wherein the at least one notch is further identified by a maximum depth.

82. (Currently amended) The method according to claim 62, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~curvatures include a first curvature that is directed rightward, a second curvature that is directed leftward, and a third curvature that is directed rightward~~.

83. (Previously presented) The system according to claim 73, wherein each of the plurality of curvatures is in a neighborhood a different point.

84. (Previously presented) The system according to claim 73, wherein the at least one notch is further identified by a minimum depth.

85. (Previously presented) The system according to claim 73, wherein the at least one notch is further identified by a maximum depth.

86. (Currently amended) The method according to claim 67, wherein the at least three turn points include a first turn point followed in a first direction by a second turn point and followed in a second direction by a third turn point~~curvatures include a first curvature that is directed rightward, a second curvature that is directed leftward, and a third curvature that is directed rightward~~.

87. (Previously presented) The software storage medium according to claim 74, wherein each of the plurality of curvatures is in a neighborhood a different point.

88. (Previously presented) The software storage medium according to claim 74, wherein the at least one notch is further identified by a minimum depth.

89. (Previously presented) The software storage medium according to claim 74, wherein the at least one notch is further identified by a maximum depth.

90. (Previously presented) A method of digitizing shapes, said method comprising:

receiving at least one data representing at least one shape;

identifying at least one outline of the at least one shape in the at least one data; and

identifying a grain line wherein said grain line is identified by determining a line within the at least one outline that is longest and straightest.

91. (Previously presented) A system for digitizing shapes, said system comprising:

a memory arrangement including thereon a computer program; and

a processing arrangement which, when executing the computer program is configured to:

receive at least one data representing at least one shape;

identify at least one outline of the at least one shape in the at least one data; and

identify a grain line wherein said grain line is identified by determining a line within the at least one outline that is longest and straightest.

92. (Previously presented) Software stored in a computer-readable storage medium which, when executed by a processing arrangement, is configured to digitize shapes, said software storage medium comprising:

a software program including:

a first module which, when executed, receives at least one data representing at least one shape;

a second module which, when executed, identifies at least one outline of the at least one shape in the at least one data; and

a third module which, when executed, identifies a grain line wherein said grain line is identified by determining a line within the at least one outline that is longest and straightest.

93. (Previously presented) The method according to claim 90, wherein the line within the at least one outline that is longest and straightest is determined based on an analysis of raster data.

94. (Previously presented) The method according to claim 90, wherein the line within the at least one outline that is longest and straightest is determined based on an analysis of vector data.

95. (Previously presented) The system according to claim 91, wherein the line within the at least one outline that is longest and straightest is determined based on an analysis of raster data.

96. (Previously presented) The system according to claim 91, wherein the line within the at least one outline that is longest and straightest is determined based on an analysis of vector data.

97. (Previously presented) The software storage medium according to claim 92, wherein the line within the at least one outline that is longest and straightest is determined based on an analysis of raster data.

98. (Previously presented) The software storage medium according to claim 92, wherein the line within the at least one outline that is longest and straightest is determined based on an analysis of vector data.

99. (Previously presented) The method according to claim 90, further comprising identifying the grain line by determining the longest and straightest line that is darkest.

100. (Previously presented) The system according to claim 91, further comprising a processing arrangement which, when executing the computer program is configured to identify the grain line by determining the longest and straightest line that is darkest.

101. (Previously presented) The software storage medium according to claim 92, further comprising a forth module which, when executed, identifies the grain line by determining the longest and straightest line that is darkest.